

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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SERIAL NO.: 10/727,199  
FILING DATE: December 2, 2003  
TITLE: Multi-Capability Display  
EXAMINER: Stephen G. Sherman  
GROUP ART UNIT: 2629  
ATTORNEY DOCKET NO. 20412-08188

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Dated: November 10, 2008

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REPLY BRIEF

This Reply Brief is filed in accordance with 37 CFR § 41.41 in response to the Examiner's Answer, which was mailed on September 8, 2008.

## *Argument*

### **A. Claims 1, 4-13, 15-17, 19-20, 22, 27, 29-30, 33-40, and 42-44 are Patentable Over Nakagawa, Spletzer, and Lechner**

The Examiner rejected claims 1, 4-13, 15-17, 19-20, 22, 27, 29-30, 33-40, and 42-44 under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa in view of Spletzer and further in view of Lechner.

#### Claims 1, 5-8, 10-12, 15-17, 19, 27, 29, and 38

Claim 1 is representative, and recites:

A multi-projector display system for **displaying on a screen a display image** corresponding to **a source image** including at least one window, comprising:

- a window projector, for displaying, at a display location on the screen, a first portion of the display image corresponding to a movable window from the source image;
- a workspace projector, for displaying on the screen a second portion of the display image comprising a blank area corresponding to the display location of the movable window from the source image, wherein no light is projected in the blank area by the workspace projector;
- an input device, for **receiving user input changing the source image**; and
- a control mechanism, coupled to the window projector and input device, for, **responsive to the input device receiving a user command to drag the moveable window from a first location to a second location in the source image, controlling the window projector to affect a change in the display location on the screen of the first portion of the display image.**

As discussed in the Appeal Brief of August 1, 2008, the claimed invention is patentably distinguishable over Nakagawa, Spletzer, and Lechner. Specifically, the Examiner has admitted that neither Spletzer nor Lechner discloses providing changes to a source image via user input.

Nor does Nakagawa remedy this deficiency. The Examiner alleged that Nakagawa shows this limitation at FIG. 4 (user input device 1) and FIGS. 9A & 9B. However, in this

section and elsewhere, Nakagawa merely shows an interactive display whiteboard, in which “windows” displayed on the whiteboard may be moved such that they are displayed in a different position on the whiteboard. *See, e.g.*, Nakagawa, FIGS. 9A-9B, [0071] – [0076]. In other words, a displayed window may be moved within a display. Thus, Nakagawa discloses only one image: the one displayed on the whiteboard. *Id.* No corresponding **source image**, or change to a **source image**, is disclosed, much less controlling a window projector “responsive to ... receiving a user command to drag the movable window ... **in the source image.**”

The Examiner’s rationale is that “Since the display is created by the projector from a single source image, user input is received to affect changes to the display image” (emphasis added). However, the claim specifies that the user input received is “user input changing the **source image.**” As shown above, Nakagawa’s user input changes its display image. The Examiner argues on page 18 of the Answer of September 8, 2008, that moving windows displayed on the whiteboard must in turn implicitly alter some image that is projected onto the whiteboard, and that such an implied image constitutes the claimed “source image.” However, this interpretation effectively reverses the claimed operation, with dragging of a window in the **display** image affecting a change in the **source** image. In contrast, what is claimed is “affect[ing] a change in ... the **display** image” responsive to “drag[ging] the moveable window ... in the **source** image.” In order for such a “reversed” interpretation to be valid, the display window would have to act as the source window for all parts of the claim, and vice-versa. Since this is not the case—for example, Nakagawa does not disclose blank areas within the **source** image – this interpretation fails.

Thus, modifying Nakagawa such that the user input device 1 affects a change to a source image would require a modification of Nakagawa’s disclosed, established function of dragging a window within a display image. However, the Examiner provides no rationale for modifying Nakagawa in this manner, and thus must be applying improper hindsight reasoning gleaned solely from Appellants’ specification to make this jump in logic. *See* MPEP 2145 (Examiner’s rationale may “not include knowledge gleaned only from applicant’s disclosure”). Thus, the Examiner’s suggestion would require that Nakagawa’s input device is used apart from and beyond its “established function,” such that the “predictability” of the modification is precluded. *See KSR*, 127 S.Ct. 1727, 1739 (2007). Therefore, the claimed invention is “more than a

predictable use of [these] prior art elements according to their established functions” under *KSR*.  
*Id.*

Thus, claim 1 is patentably distinguishable over the cited references, alone or in the suggested combination.

Claim 38 recites, *inter alia*, “controlling the window projector to affect a change in at least one of the display location and size of the first portion of the display image on the screen **in response to user input changing the source image.**” Thus, Appellants submit that claim 38 is patentably distinguishable over Nakagawa in view of Spletzer and further in view of Lechner for the above-stated reasons.

Claims 4, 30, 34-37, 39-40, and 42-44

Claim 4 is representative, and recites:

A multi-projector display system for displaying a display image including portions corresponding to at least two windows of a source image, comprising:

- a window projector, for displaying, at a first display location, a first portion of the display image corresponding to a first window of the source image, wherein the first window is an active window selected via user input to the source image;
- a workspace projector, for displaying a second portion of the display image corresponding to a second window of the source image, having a second display location different from the first display location, and comprising a blank area corresponding to the first display location, wherein no light is projected in the blank area by the workspace projector;
- an input device, for receiving user input changing the source image; and
- a control mechanism, coupled to the window projector and input device, for, responsive to the input device receiving a user command to change the active window from the first window to the second window such that the second window becomes the active window, controlling the window and workspace projectors such that the window projector displays the second portion of the image at the second display location and the workspace projector displays the first portion of the image at the first display location, comprising a second blank area corresponding to the display location of the second window, wherein no light is projected in the second blank area by the workspace projector.**

Claim 4 is patentably distinguishable over Nakagawa, Spletzer, and Lechner for the reasons discussed in the Appeal Brief of August 1, 2008. Additionally, note that claim 4 recites “a second blank area corresponding to the display location of the second window” as a result of the control mechanism controlling the window and workspace projectors to switch between displaying the first and second portions corresponding to the first and second windows, whereas the blank area initially corresponded to the first display location. Thus, when the control mechanism causes the window projector and the workspace projector to switch, a blank in which no light is projected by the workspace projector is switched from the first display location of the first window to the second display location of the second window, as well.

The Examiner properly admits that both Nakagawa and Spletzer fail to disclose the claimed blank areas, and thus instead cites Lechner 5:1-17 and 7:18-40, which at best disclose a means for blanking an inset image projector, but not switching a blank area between display locations. The Examiner cited Spletzer for the concept of focusing on an area deserving more attention, such as a ball in a sporting event, by following the object as it moves. However, such following of the object fails to show switching **a blank** from the first display location of the first window to the second display location of the second window, nor does the Examiner allege that it does. Thus, claim 4 is also patentable over the applied references for this additional reason.

**B. Claims 46 and 48 are Patentable Over Nakagawa, Spletzer, Lechner, and Dugdale**

The Examiner rejected claims 46 and 48 under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa in view of Spletzer and further in view of Lechner and Dugdale.

Claim 46 is representative, and recites:

A multi-projector display system for displaying a display image corresponding to a source image including at least one window, comprising:

- a window projector, for displaying, at a display location, a first portion of the display image corresponding to a resizable window from the source image;
- a workspace projector, for displaying a second portion of the display image comprising a blank area corresponding to a display location of the

resizable window from the source image, wherein no light is projected in the blank area by the workspace projector;  
**an input device, for receiving user input changing the source image; and**  
**a control mechanism, coupled to the window projector and the input device, for, responsive to the input device receiving a user command to resize the resizable window from the source image, controlling the window projector to affect a change in the size of the first portion of the display image.**

The claimed invention is patentably distinguishable over Nakagawa, Spletzer, Lechner, and Dugdale for the reasons discussed in the Appeal Brief of August 1, 2008. Specifically, claim 46, like claim 1, recites “an input device, for receiving user input changing the source image,” and is thus patentably distinguishable over Nakagawa, Spletzer, and Lechner for the reasons articulated above with respect to claim 1. Dugdale does not remedy the above-stated deficiencies of Nakagawa, Spletzer, and Lechner, nor does the Examiner argue that it does.

Dugdale has additional deficiencies with respect to claim 46. The Examiner refers to the rejection of claim 1, and further relies on Dugdale 3:4-9, “where the lens on the target projector can perform a zoom function to change the size of the target image” as allegedly “teach[ing] a display system wherein a control mechanism changes the size of the window portion of the image **in response to a user command for resizing the window.**” Final Office Action, p. 15 (emphasis added). Appellants respectfully disagree.

First, the zoom / focus function of Dugdale 3:4-10 would not be effective for resizing a window. Resizing of windows results in changing the width or height of the window, thus altering the window aspect ratio. The zoom / focus function of Dugdale, in contrast, instead zooms in and focuses on portions of the three-dimensional objects displayed in the Dugdale simulator, without changing their aspect ratio, an entirely distinct purpose not useful within the context of resizing a window, as claimed.

Second, the “lens on the target projector” cannot be the claimed “control mechanism coupled to the window projector and the input device...” The only thing that could possibly be considered an “input device” in Dugdale’s system is the joystick/keyboard 66, and it is not coupled to the lens system 56—it merely controls servo motors that move the image in azimuth and elevation (see Dugdale, 3:14-17), but do not resize it, as claimed. See Dugdale, FIG. 2. In addition, the image zoom/sizing described in Dugdale is “for the target image to appear the

proper size” (Dugdale, 3:9-10), not “responsive to the input device receiving a user command to resize the resizable window from the source image” as claimed. Dugdale shows no such **user device** or other means for **receiving a user command**, and no means for **resizing** any portion of **the source image**, as claimed.

The Examiner responds on page 23 of the Answer of September 8, 2008, that Dugdale “was only used to teach of [*sic*] resizing,” and not the claimed affecting a change in size “responsive to the input device receiving a user command to resize.” Thus, the Examiner rejects the claimed invention by citing Nakagawa to show a projector, an input device, and the dragging of a window; Spletzer to show separate window and workspace projectors; Lechner for displaying a blank area; and Dugdale to show zoom and focus features allegedly analogous to the claimed affecting a change in the size of a portion of the display image. Such a piecemeal treatment of the claim renders it senseless, failing to show elements such as a control mechanism “coupled to the window projector and the input device, for, responsive to the input device receiving a user command to resize the resizable window from the source image, controlling the window projector to affect a change in the size of the first portion of the display image;” rather, the combination of Nakagawa and Dugdale, for example, would at best produce a system with a window projector, an input device, and the ability to zoom in and focus on portions of a three-dimensional simulator object, but without the ability to resize a window based on user input, or even the ability to resize a window at all.

Thus, claim 46 is patentably distinguishable over the cited references, alone or in the suggested combination.

**C. Claims 22 and 25 are Patentable Over Nakagawa, Spletzer, Lechner, and Fisher**

The Examiner rejected claims 22 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa in view of Spletzer and further in view of Lechner and Fisher.

Claim 22 is representative, and recites:

A multi-projector display system for displaying a display image corresponding to at least one window in a source image, comprising:

a window projector, for displaying, at a display location, a first portion of the display image corresponding to a movable window from the source image;  
**a plurality of workspace projectors, for collectively displaying a second portion of the display image comprising a blank area corresponding to the display location of the movable window,** wherein no light is projected in the blank area by the workspace projector, and **wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors;**  
**an input device, for receiving user input changing the source image;** and  
at least one control mechanism, coupled to the window projector and the input device, for, responsive to the input device receiving a user command to drag the window from one location to another in the source image, controlling the window projector to affect a change in the display location of the first portion of the display image.

Thus, claim 22 recites “**a plurality of workspace projectors, for collectively displaying a second portion of the display image comprising a blank area...wherein no seam is visible in the blank area collectively displayed by the plurality of workspace projectors.**” As noted by Appellants in the Appeal Brief of August 1, 2008, the Examiner’s previous rejections were based on an incorrect reading of the claim language that failed to address the language of claim 22 in its current form, e.g., that there is a plurality of workspace projectors. In his Answer of September 8, 2008, the Examiner cites Lechner 7:18-40 as allegedly disclosing a plurality of workspace projectors, but this portion shows only a blanking means for blanking the inset image projector. Even if the cited portion were somehow considered to show a plurality of workspace projectors, it would still fail to show that the workspace projectors are “for **collectively displaying... a blank area,**” much less a blank area specifically “corresponding to the display portion of a movable window.” Rather, any blank areas in Lechner correspond to an inset image 24 of the inset image projector, as in Lechner FIG. 1. The inset image 24 is comparatively small in size and there is no need for a **plurality** of workspace projectors to **collectively** display its corresponding blank area, nor does Lechner suggest that there is. Thus, the claimed invention is also patentable over the applied references for this additional reason.

#### **D. Claims 49 Patentable Over Nakagawa, Spletzer, Lechner, Fisher, and Surati**

The Examiner rejected claim 49 under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa in view of Spletzer and further in view of Lechner, Fisher, and Surati.



As noted in the Appeal Brief of August 1, 2008, claim 49 depends from claim 22, and is thus patentably distinguishable over Nakagawa, Spletzer, Lechner, and Fisher for at least the reasons articulated above with respect to claim 22, and Surati fails to remedy the deficiencies of the other references.

**E. Claims 47 is Patentable Over Nakagawa, Spletzer, Lechner, Dugdale, and Fisher**

The Examiner rejected claim 47 under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa in view of Spletzer and further in view of Lechner, Dugdale, and Fisher.

As noted in the Appeal Brief of August 1, 2008, claim 47 recites the resizable window aspects of claims 46 and 48 described above, as well as the no visible seam in the blank area collectively displayed by the plurality of workspace projectors aspect of claims 22 and 25, and is thus patentably distinguishable over Nakagawa, Spletzer, Lechner, Dugdale, and Fisher for at least the same reasons articulated above with respect to claims 46, 48, 22, and 25.

***Summary***

For the foregoing reasons, Appellants believe that the Examiner's rejections of claims 1, 4-8, 10-12, 15-17, 19, 22, 25, 27, 29, 30, 34-40, 42-44, and 46-49 were erroneous, and respectfully request that the Board reverse the rejections.

Respectfully submitted,  
JOHN BARRUS ET AL.

Dated: November 10, 2008

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